

REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Claims 25 and 27-30 have been amended.

This amendment changes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 1-32 are now pending in this application, of which claims 1-24 are withdrawn from consideration.

Rejections under 35 U.S.C. § 112, second paragraph

Claims 27-29 stand rejected under 35 U.S.C. § 112, second paragraph as being indefinite. Applicants have amended claims 27-29 to address the issues raised in the Office Action, and submit that the rejection has been overcome.

Rejections under 35 U.S.C. §§ 102 and 103

Claims 25-26 and 28 were rejected under 35 U.S.C. § 102(b) as being anticipated by EP 918,145 to Ishii et al. (“Ishii ‘145”). Claims 25-26 and 28 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,296,813 to Ishii et al. (“Ishii ‘813”). Claims 27-31 were rejected under 35 U.S.C. § 103(a) as being unpatentable over either Ishii ‘145 or Ishii ‘813 in view of U.S. Patent No. 4,975,406 to Frestad et al. (“Frestad”). Claim 32 was rejected under 35 U.S.C. § 103(a) as being unpatentable over either Ishii ‘145 or Ishii ‘813 in view of U.S. Patent No. 5,152,231 to Patil et al. (“Patil”). Applicants respectfully traverse these rejections for at least the following reasons.

Independent claim 25 is as follows:

A catalytic converter, comprising:

 a carrier; and

 a layered structure disposed on the carrier, the layered structure including:

 a hydrocarbon (HC) trap layer trapping HC, said HC trap layer being disposed on the carrier; and

a multilayered catalyst system disposed on the HC trap layer, said multilayered catalyst system comprising a first catalyst layer disposed on the HC trap layer and a second catalyst layer disposed on the first catalyst layer disposed on the HC trap layer, said first and second catalyst layers comprising catalyst noble metals, respectively, said catalyst noble metal present in the second catalyst layer being controlled to be active earlier than the catalyst noble metal present in the first catalyst layer.

Thus, in claim 25, the multilayer catalyst system is arranged such that the first catalyst layer is disposed on the HC trap layer, and the second catalyst layer is disposed on the first catalyst layer and directly over the HC trap layer, where the catalyst noble metal present in the second catalyst layer is controlled to be active earlier than the catalyst noble metal present in the first catalyst layer. Ishii '145 and Ishii '813 both fail to suggest a catalytic converter with the arrangement of first and second catalyst layers as recited in claim 25, or the advantages of such an arrangement.

Ishii '145 discloses an exhaust emission control catalyst, and in particular one embodiment as shown in Figure 6 discloses a catalyst divided into an X portion and a Y portion located upstream and downstream, respectively, with respect to exhaust gas flow (col. 6, line 58 to col. 7, line 5). As can be seen in Figure 6, the X portion includes carrier 11, an HC absorption material 13 disposed on the carrier, and a three way catalytic converter layer 14 disposed on the HC absorption material 13. Figure 6 illustrates that the Y portion includes the carrier 11, the three way catalytic converter layer 14 disposed on the carrier, and a high carrier three way catalytic converter layer 15 disposed on the three way catalytic converter layer 14.

Ishii '145 fails to disclose, however, an arrangement where a first catalyst layer is disposed on an HC trap layer, and a second catalyst layer is disposed on the first catalyst layer and *directly over* the HC trap layer, where the catalyst noble metal present in the second catalyst layer is controlled to be active earlier than the catalyst noble metal present in the first catalyst layer. The Office Action equates the three way catalytic converter layer 14 and the high carrier three way catalytic converter layer 15 of Ishii '145 with the first and second catalyst layers, respectively, as recited in claim 25. The layers 14 and 15 of Ishii '145, however, are not arranged such that layer 15 is disposed both on layer 14 and *directly over*

HC absorption material 13. Thus, even assuming that the layers 14 and 15 correspond to the first and second catalyst layers of claim 25, Ishii '145 does not anticipate claim 25 because the layers 14 and 15 are not arranged in the manner recited.

The remaining references cited in the rejection fail to cure the deficiencies of Ishii '145. Ishii '813 has a very similar disclosure to Ishii '145 and analogous arguments apply. Frestad and Patil were cited for allegedly disclosing details of a washcoat, but also fail to suggest the arrangement of the first and second catalyst layers of claim 25.

Moreover, the references cited fail to suggest the advantages of the arrangement of the first and second catalyst layers of claim 25, where the catalyst noble metal present in the second catalyst layer is controlled to be active earlier than the catalyst noble metal present in the first catalyst layer. With the structure of claim 25, the catalytic converter can be activated earlier, and the purification of the HC released from the HC trap layer is thus improved (See present specification on page 5, lines 4-19). The references cited in the rejection, failing to suggest the arrangement of the first and second catalyst layers relative to the HC trap layer as recited in claim 25, also fail to suggest the advantages resulting therefrom.

Double Patenting

Claims 25-31 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of Ishii '813 in view of Frestad. Applicants traverse this rejection for reasons analogous to those provided above.

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or

even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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